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(54) **Barley with reduced SSII activity and starch and starch containing products with a reduced amylopectin content**

(57) Barley with reduced SSII activity has a starch structure with reduced amylopectin content and a consequent high relative amylose content. Additionally the grain has can have a relatively high  $\beta$  glucan content. The structure of the starch may also be altered in a number of ways which can be characterised by having a low gelatinisation temperature but with reduced swelling. The viscosity of gelatinised starch of the starch is also

reduced. There is a chain length distribution of the amylopectin content and a low crystallinity of the starch. The starch is also characterised by having high levels of lipid associated starch exhibiting very high levels of V form starch crystallinity. The dietary fibre content of the starch is high. This has desirable dietary and food processing characteristics.

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## EUROPEAN SEARCH REPORT

Application Number  
EP 10 18 3887

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,D	SCHONDELMAIER J ET AL: "Genetical studies on the mode of inheritance and localization of the amol (high amylose) gene in barley", PLANT BREEDING, vol. 109, no. 4, 1992, pages 274-280, XP008040915, ISSN: 0179-9541 * the whole document *	1,14-16	INV. A01H5/10 C12N15/29 C08L3/02
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A	ANONYMOUS: "GSHO 2476", National plant germplasm system, 23 June 1997 (1997-06-23), XP002641401, Retrieved from the Internet: URL:http://www.ars-grin.gov/npgs/gsho2476 * abstract *	14	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 June 2011	Examiner Oderwald, Harald
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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X	<p>TESTER R F ET AL: "THE EFFECTS OF AMBIENT TEMPERATURE DURING THE GRAIN-FILLING PERIOD ON THE COMPOSITION AND PROPERTIES OF STARCH FROM FOUR BARLEY GENOTYPES", JOURNAL OF CEREAL SCIENCE, vol. 13, no. 2, 1991, pages 113-128, XP002641402, ISSN: 0733-5210 * the whole document *</p> <p>-----</p>	1-4, 13-16	
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A	<p>MORELL MATHEW K ET AL: "Analysis of starch structure using fluorophore-assisted carbohydrate electrophoresis", ELECTROPHORESIS, vol. 19, no. 15, November 1998 (1998-11), pages 2603-2611, XP002641404, ISSN: 0173-0835 * the whole document *</p> <p>-----</p> <p style="text-align: right;">-/--</p>	1	
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		15 June 2011	Oderwald, Harald
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			

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1	Place of search The Hague	Date of completion of the search 15 June 2011	Examiner Oderwald, Harald
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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Application Number  
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	<p>SCHULMAN A H ET AL: "Structural analysis of starch from normal and shx (shrunken endosperm) barley (Hordeum vulgare L.)", CARBOHYDRATE RESEARCH, ELSEVIER SCIENTIFIC PUBLISHING COMPANY. AMSTERDAM, NL, vol. 275, no. 2, 2 October 1995 (1995-10-02), pages 361-369, XP004021887, ISSN: 0008-6215 * the whole document *</p> <p>-----</p>	1	
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Place of search The Hague		Date of completion of the search 15 June 2011	Examiner Oderwald, Harald
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